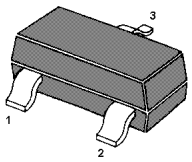
PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into five groups R, O, Y, P and L, according to its DC current gain. As complementary type the NPN transistor MMBTSC945 is recommended.



1.Base 2.Emitter 3.Collector
SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	150	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-55 to +150	°C

Characteristics at T_{amb}=25 °C

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$=6V, $-I_C$=1mA						
Current Gain Group	R	h_{FE}	40	-	80	-
	O	h_{FE}	70	-	140	-
	Y	h_{FE}	120	-	240	-
	P	h_{FE}	200	-	400	-
	L	h_{FE}	350	-	700	-
Collector Base Breakdown Voltage at $-I_C$=100μA		$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C$=10mA		$-V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $-I_E$=10μA		$-V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current at $-V_{CB}$=60V		$-I_{CBO}$	-	-	0.1	μA
Emitter Cutoff Current at $-V_{EB}$=5V		$-I_{EBO}$	-	-	0.1	μA
Collector Saturation Voltage at $-I_C$=100mA, $-I_B$=10mA		$-V_{CE(sat)}$	-	-	0.3	V
Base Emitter Voltage at $-V_{CE}$=6V, $-I_C$=1mA		$-V_{BE(on)}$	0.5	-	0.8	V
Gain Bandwidth Product at $-V_{CE}$=6V, $-I_C$=10mA		f_T	50	180	-	MHz
Output Capacitance at $-V_{CB}$=10V, f=1MHz		C_{OB}	-	2.8	-	pF
Noise Figure at $-V_{CE}$=6V, $-I_C$=0.3mA, f=100Hz, R_S=10KΩ		F	-	6	20	dB

Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

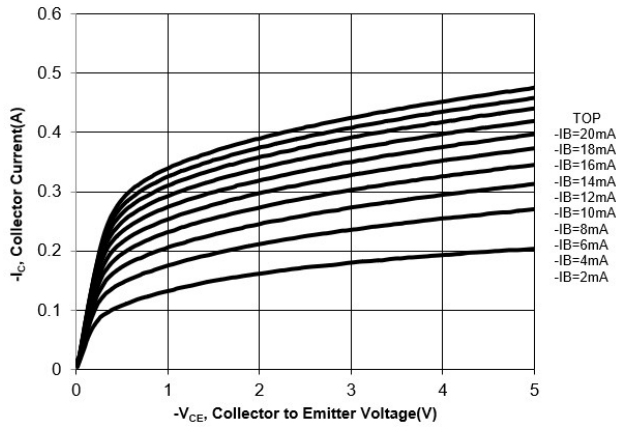


Fig. 2 Collector Current vs. Base to Emitter Voltage

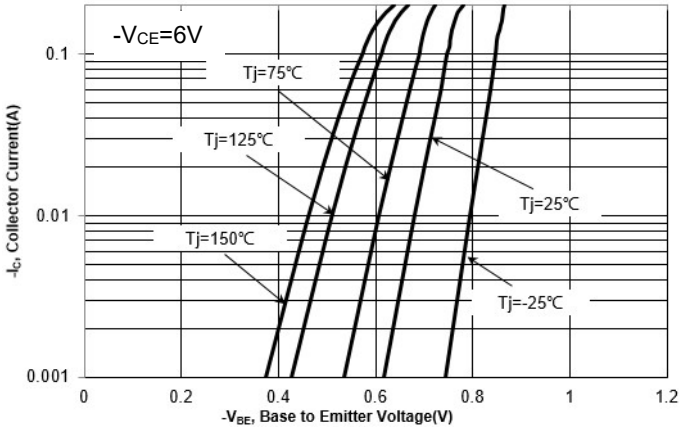


Fig. 3 DC Current Gain vs. Collector Current

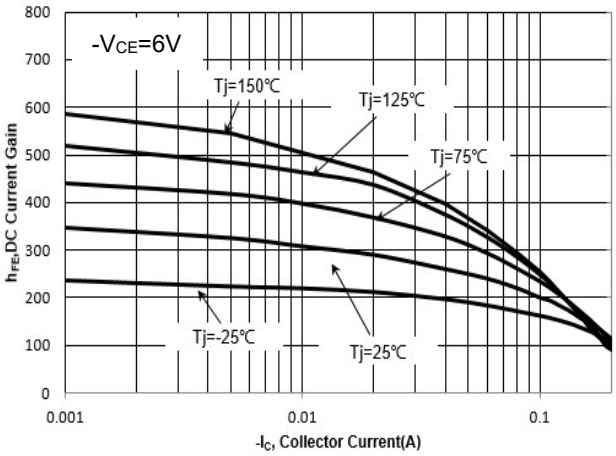


Fig. 4 V_{BESAT} vs. Collector Current

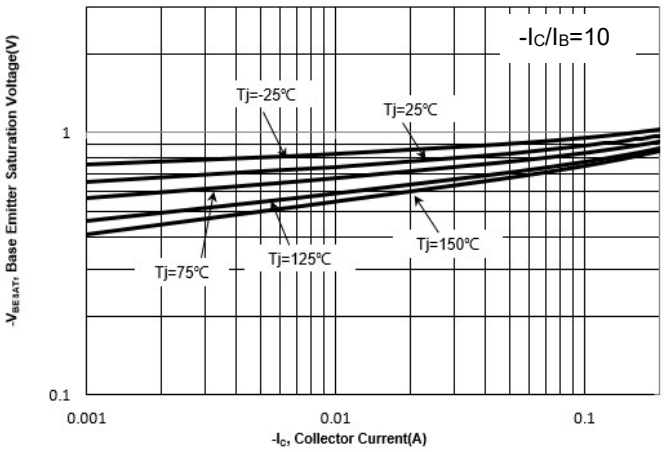


Fig. 5 V_{CESAT} vs. Collector Current

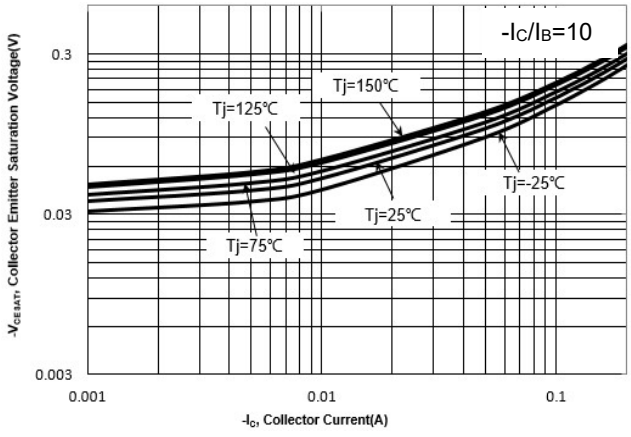


Fig. 7 Power Derating Curve